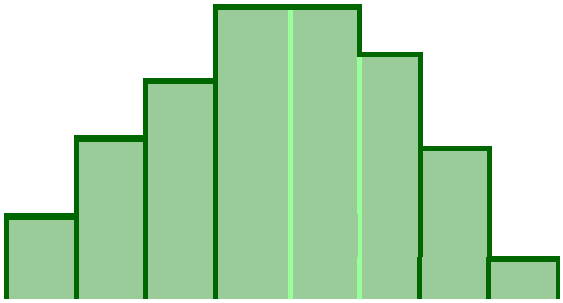

Epidemiology Newsletter

Office of Epidemiology **July 2004** **Utah Department of Health**

Index . . . . .

The Epidemiology Newsletter is published monthly by the Utah Department of Health, Division of Epidemiology and Laboratory Services, Office of Epidemiology, to disseminate epidemiologic information to the health care professional and the general public.

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Appropriation 3705

UTAH CHILDHOOD BLOOD LEAD SCREENING RECOMMENDATIONS

Background:

Lead poisoning can affect nearly every system in the body. Because lead poisoning often occurs with no obvious symptoms, it frequently goes unrecognized. Lead poisoning can cause learning disabilities, behavioral problems, and at very high levels, seizures, coma, and even death.

The major source of lead exposure among U.S. children is lead-based paint and lead-contaminated dust found in deteriorating buildings. Lead-based paints were banned for use in housing in 1978. Eighty-three percent of all homes built in the United States before 1978 still contain some lead-based paint at a concentration of a least one mg/cm2. The older the house, the more likely it is to contain lead-based paint and have a higher concentration of lead in the paint. Housing built before 1950 poses the greatest risk of exposure to children.

Children under the age of 6 years are at highest risk because they absorb lead more than adults due to their developing bodies and they tend to put their hands or other objects into their mouths. Lead poisoning is entirely preventable. The key is stopping children from coming into contact with lead. Children who are at risk of lead poisoning need to be tested. If the child has an elevated blood lead level, a follow-up environmental investigation is conducted to determine the source of the lead poisoning. Treatment generally consists of removing the source of lead contaminants.

The Centers for Disease Control and Prevention (CDC) has identified national risk factors for children with elevated blood lead levels. Risk factors include living in or regularly visiting older housing, other children in the family or neighborhood with elevated blood lead levels, adults in the family who participate in lead-related occupations or hobbies, and living in a neighborhood that is close to active industries that can potentially release lead into the atmosphere. There are also associations between elevated blood lead levels and race, ethnicity and low income.

The United States General Accounting Office (GAO) published a report on elevated blood lead levels (EBLL) in children. The basis of the GAO report was the analysis of the most recently released phase of the National Health and Nutrition Examination Survey (NHANES). According to the GAO report, children receiving Medicaid were more than three times as likely to have elevated blood lead levels when compared to children not receiving Medicaid.

New Information

A study completed in 2002, by the Utah Department of Health, Environmental Epidemiology Program entitled “Prevalence of Elevated Blood Lead Levels in Utah Medicaid Children,” found that the prevalence of elevated blood lead levels in children ages 12 to 36 months old in Utah, who were enrolled in Medicaid was not higher than the prevalence in non-Medicaid children of the same age in Utah. This study demonstrated that unlike some other states, Medicaid status is not a risk factor in Utah for lead poisoning.

Risk factors for lead poisoning in Utah Medicaid children identified by the Medicaid study include: minority race, male children, placing fingers in the mouth, chewing on toys, eating dirt or other non-food items, living in an urban neighborhood, the presence of peeling or chipping paint in the home, and living in pre-1950 housing.

The Utah Department of Health Blood Lead Screening Policy

All children in Utah that live in a zip code that has 27 % pre-1950 housing should have at least one venous or capillary blood lead test at age 1 and 2 years of age, and children 36 to 72 months of age who have not been screened previously should receive such testing. CDC recommends the use of 27% pre-1950 housing as a cut-off point for universal screening in designated areas. A list of zip codes with 27 % pre-1950 housing is presented in Table 1.

In addition, since age of housing has been identified as the major risk factor for childhood lead poisoning in Utah, all children in Utah living in pre-1978 housing should have at least one venous or capillary blood lead test between the ages of 12 and 24 months and children 25 to 72 months of age should have a blood lead test if they have not been previously screened.

Note: Whenever a parent or health care provider suspects that a child is at risk for lead exposure, a blood lead test should be performed regardless of health department recommendations.

The following basic-risk questionnaire was developed for use by the child's health care provider to help determine if a child is at risk of lead poisoning. If a parent/guardian responds "yes" or "don't know" to any of the questions the child should be screened.

1 – Does your child live in or regularly visit a house that was built before 1950? This question could apply to a facility such as a home day-care center or the home of a babysitter or relative.

2 – Does your child live in or regularly visit a house built before 1978 with recent or ongoing renovations or remodeling (within the last 6 months)?

3 – Does your child have a sibling or playmate who has or did have lead poisoning?

4 – Does your child live near or play on tailings from mining or milling operations?

Table 1.

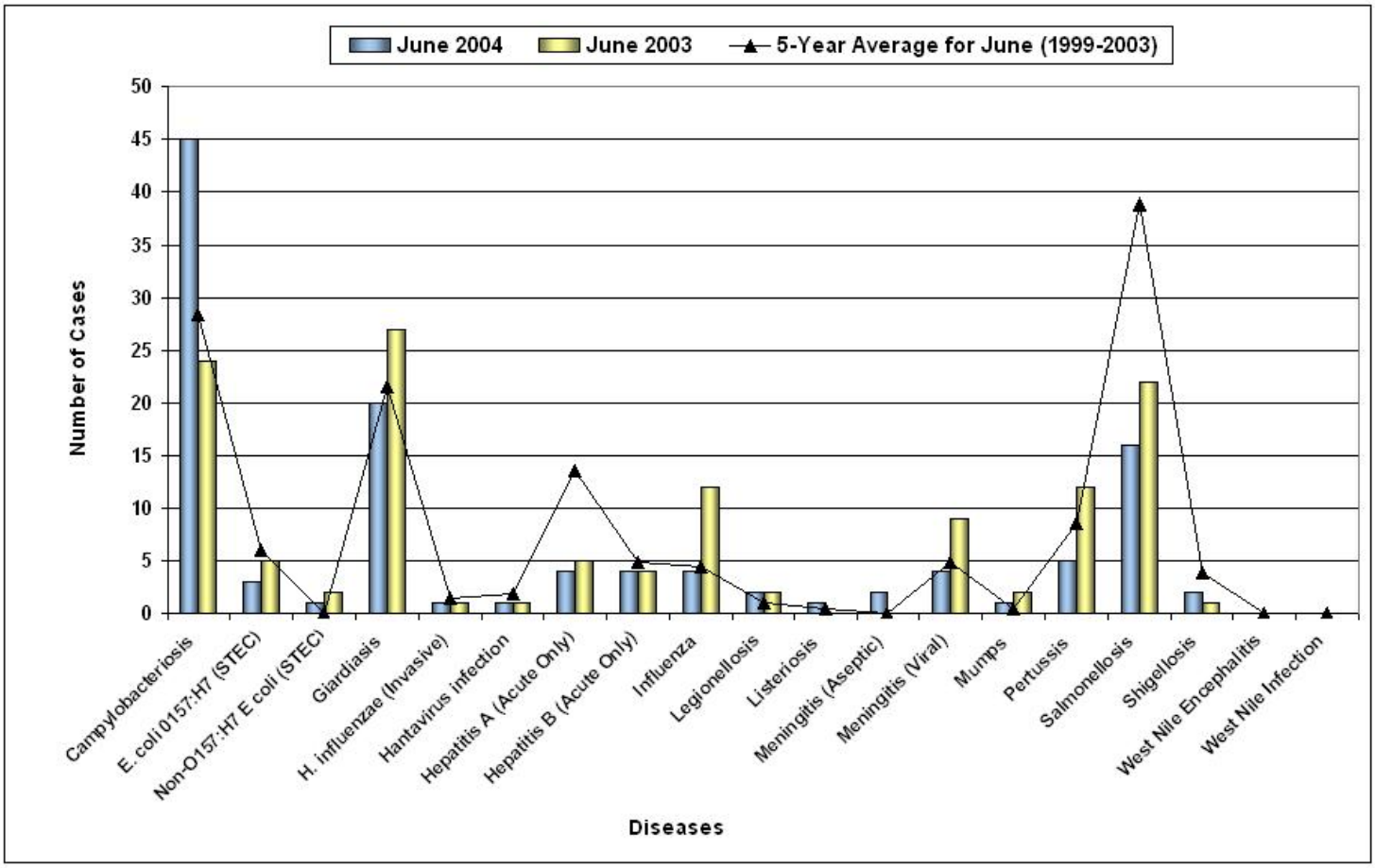
Zip Codes With Greater Than or Equal to 27% of Housing Built Before 1950 (2000 Census)

Beaver:	84713, 84751, 84752
Box Elder:	84301, 84306, 84307, 84309, 84311, 84312, 84313, 84314, 84316, 84324, 84329, 84330, 84331, 84334, 84336, 84340
Cache:	84304, 84305, 84320, 84326, 84328, 84333, 84335, 84338, 84339
Carbon:	84501, 84520, 84526, 84529, 84539
Daggett:	percent of housing built before 1950 is less than 27% in all zip codes.
Davis:	percent of housing built before 1950 is less than 27% in all zip codes.
Duchesne:	84073
Emery:	84522, 84523
Garfield:	84712, 84718, 84726, 84759, 84776
Grand:	percent of housing built before 1950 is less than 27% in all zip codes.
Iron:	84753, 84760, 84761, 84772
Juab:	84628, 84639, 84648
Kane:	84758
Millard:	84631, 84635, 84636, 84637, 84638, 84640, 84650, 84656
Morgan:	84018
Piute:	84723, 84732, 84740, 84743, 84750
Rich:	84064, 84086
Salt Lake:	84006, 84101, 84102, 84103, 84104, 84105, 84106, 84108, 84111, 84115
San Juan:	84530
Sanpete:	84621, 84622, 84623, 84627, 84629, 84630, 84632, 84634, 84642, 84643, 84646, 84647, 84662, 84667
Sevier:	84620, 84652, 84654, 84657, 84701, 84724, 84730, 84744, 84754, 84766
Summit:	84024
Tooele:	84034, 84069, 84071, 84080
Uintah:	84076
Utah:	84626, 84633
Wasatch:	percent of housing built before 1950 is less than 27% in all zip codes.
Washington:	84733
Wayne:	84715, 84747, 84749
Weber:	84401

The Cumulative Number of Suspect and Confirmed Cases for 20 Selected Diseases, Reported by Utah Health Districts, June 2004

Health District	Campylobacteriosis	*E. coli 0157:H7 (STEC)*	*Non-O157:H7 E coli (STEC)*	Giardiasis	*H. influenzae* (Invasive)	Hantavirus infection	Hepatitis A (Acute Only)	Hepatitis B (Acute Only)	Influenza	Legionellosis	Listeriosis	Meningitis (Aseptic)	Meningitis (Viral)	Mumps	Pertussis	Salmonellosis	Shigellosis	West Nile Encephalitis	West Nile Infection
Bear River	3															4	1		
Central	4			2				1											
Davis	7			2				1		1					1				
Salt Lake	15	3	1	5			4	1	4	1			1	1	4	6			
Southeast																1			
Southwest	1			1		1													
Summit	3																		
Tooele	1																		
Tricounty				1															
Utah County	9			6							1	1	2			3	1		
Wasatach	1			2															
Weber-Morgan	1			1	1			1				1	1			2			
June 2004	**45**	**3**	**1**	**20**	**1**	**1**	**4**	**4**	**4**	**2**	**1**	**2**	**4**	**1**	**5**	**16**	**2**	**0**	**0**
June 2003	24	5	2	27	1	1	5	4	12	2	0	0	9	2	12	22	1	0	0
5-Year Average for June (1999-2003)	28	6	0	22	1	2	14	5	4	1	0	0	5	1	9	39	4	0	0
Crude Incidence Rate: Cases per million person-months	18.66**	1.24	0.00	8.71**	0.41	0.41	1.66	1.66	2.49	0.83	0.41	0.00	1.66	0.41	2.07	6.63**	0.83	0.00	0.00
Rate Ratio (r_1/r_2) where r1= rate of reported events in June 2004 per million person-months & r2= rate of average number of reported events during June '99-03**	1.50	0.47	0.00	0.92	0.68	0.59	0.28	0.79	1.29	1.89	2.37	0.00	0.79	2.37	0.55	0.39	0.50	0.00	0.00
2004 To Date	**141**	**10**	**1**	**124**	**10**	**1**	**26**	**26**	**534**	**11**	**1**	**0**	**20**	**2**	**37**	**103**	**18**	**0**	**0**
2003 To Date	99	11	0	146	9	3	19	22	706	7	1	3	29	5	63	97	26	0	0

Statistically Significant Increase

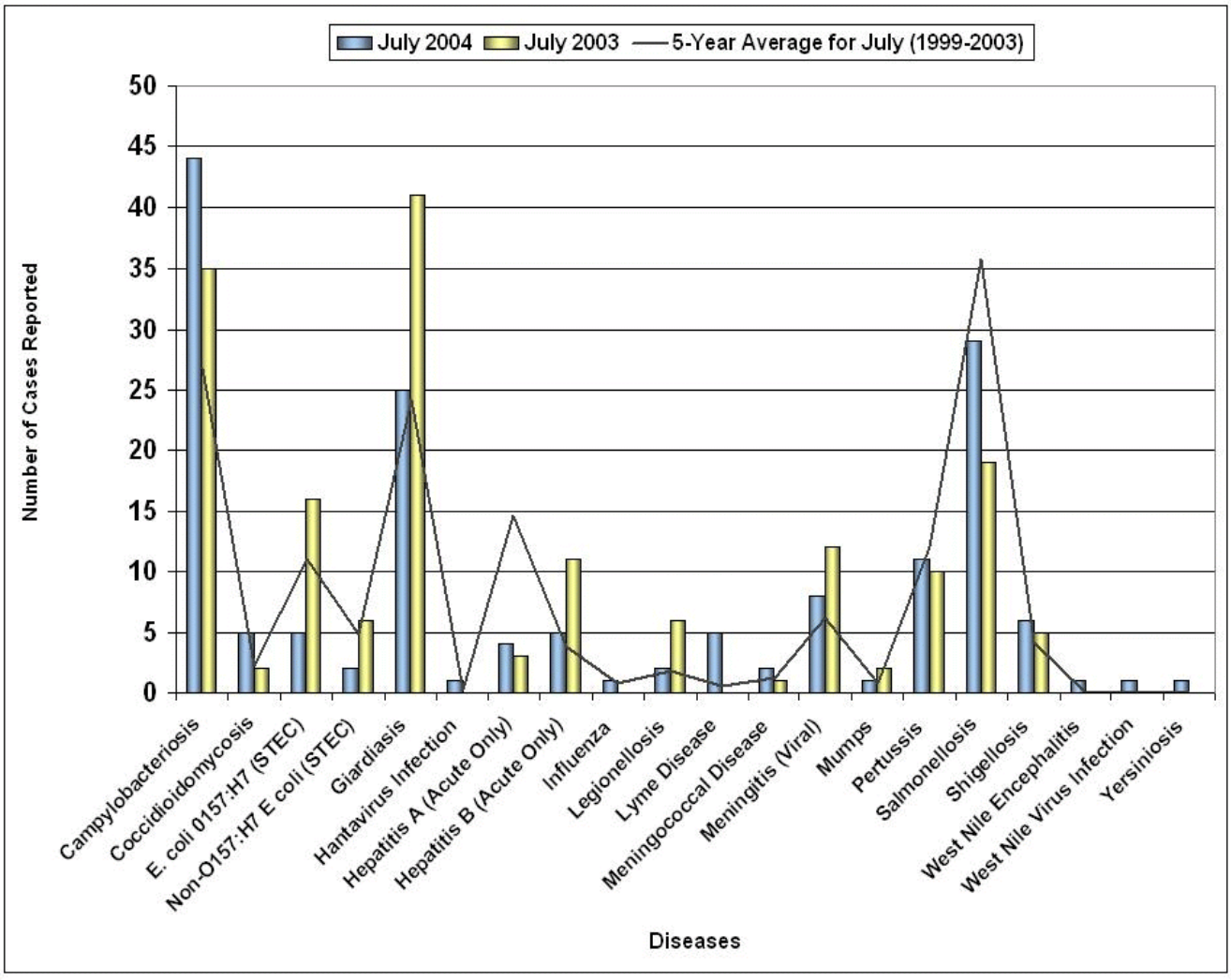

June 2004
June 2003
5-Year Average for June (1999-2003)
Number of Cases
50
45
40
35
30
25
20
15
10
5
0
Campylobacteriosis
E. coli 0157:H7 (STEC)
Non-O157:H7 E coli (STEC)
Giardiasis
H. influenzae (Invasive)
Hantavirus infection
Hepatitis A (Acute Only)
Hepatitis B (Acute Only)
Influenza
Legionellosis
Listeriosis
Meningitis (Aseptic)
Meningitis (Viral)
Mumps
Pertussis
Salmonellosis
Shigellosis
West Nile Encephalitis
West Nile Infection
Diseases

The Cumulative Number of Suspect and Confirmed Cases for 20 Selected Diseases, Reported by Utah Health Districts, July 2004.

Health District	Campylobacteriosis	Coccidioidomycosis	*E. coli 0157:H7 (STEC)*	*Non-O157:H7 E coli (STEC)*	Giardiasis	Hantavirus Infection	Hepatitis A (Acute Only)	Hepatitis B (Acute Only)	Influenza	Legionellosis	Lyme Disease	Meningococcal Disease	Meningitis (Viral)	Mumps	Pertussis	Salmonellosis	Shigellosis	West Nile Encephalitis	West Nile Virus Infection	Yersiniosis
Bear River	10		1		1											1	2	1		
Central	3		2		4	1	1						2			1				
Davis	2	1		1	3								3	1	2	3				
Salt Lake	13	2	1		6		2	3	1		3				5	12	1		1	1
Southeast								2								3				
Southwest	6	2		1	2											1				
Summit											1		1							
Tooele											1					1				
Tricounty										1					1					
Utah County	9		1		7		1			1		1	1		2	5	3			
Wasatach					1											1				
Weber-Morgan	1				1							1	1		1	1				
July 2004	**44**	**5**	**5**	**2**	**25**	**1**	**4**	**5**	**1**	**2**	**5**	**2**	**8**	**1**	**11**	**29**	**6**	**1**	**1**	**1**
July 2003	35	2	16	6	41	0	3	11	0	6	0	1	12	2	10	19	5	0	0	0
5-Year Average for July (1999-2003)	26.8	2.2	11.0	4.8	24.2	0.2	14.6	3.8	0.8	1.8	0.6	1.2	6.2	0.8	12.0	35.8	4.2	*	*	*
Cases per 100,000 population (July 2004)	1.82	0.21	0.21	0.08	1.04	0.04	0.17	0.21	0.04	0.08	0.21	0.08	0.33	0.04	0.46	1.20	0.25	0.04	0.04	0.04
2004 To Date	**186**	**19**	**13**	**13**	**152**	**1**	**32**	**29**	**462**	**13**	**8**	**4**	**28**	**3**	**51**	**132**	**24**	**1**	**1**	**1**
2003 To Date	134	7	27	17	187	0	22	33	706	13	3	2	41	7	73	117	31	0	0	3

Statistically Elevated

* No 5-year data available


July 2004
July 2003
5-Year Average for July (1999-2003)
Number of Cases Reported
50
45
40
35
30
25
20
15
10
5
0
Campylobacteriosis
Coccidioidomycosis
E. coli 0157:H7 (STEC)
Non-O157:H7 E coli (STEC)
Giardiasis
Hantavirus Infection
Hepatitis A (Acute Only)
Hepatitis B (Acute Only)
Influenza
Legionellosis
Lyme Disease
Meningococcal Disease
Meningitis (Viral)
Mumps
Pertussis
Salmonellosis
Shigellosis
West Nile Encephalitis
West Nile Virus Infection
Yersiniosis
Diseases